# COST and MANAGEMENT

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## . . CONTENTS . .



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# . EDITORIAL .

## Inflation Poses a Challenge to the Accounting Profession

There is a great deal of apathy abroad these days about the subject of inflation. Many of us are inclined to take the easy way out of facing this problem and to tell ourselves that we have not been greatly affected by inflation so far, and so let's leave the worrying to some one who has. That the possibility of runaway inflation is a spectre to be feared as a national calamity, is a generally accepted economic fact, and this feeling is currently finding expression in the United States in the words and actions of the President. Mr. Truman is truly concerned about the possible evil effects of inflation on American business and the whole American economy. If Mr. Truman is concerned, it is time for Canadians to be concerned about our own inflation problem, and to do something about it.

For years now we have watched the old familiar pattern of prices and wages, neck and neck, sometimes walking, sometimes galloping. The general public has, in a hazy way, watched this aimless race, siding with one side or the other depending on where their individual interests lay; and they have, in a general way, been aware that the race was accomplishing nothing for either contestant. We of the accounting profession, have been in a particularly good position to see the pointlessness of the race. Since the war, we have seen wage negotiations result in wage increases time after time, with a resulting increase in costs and reduction in net profits. We have seen prices increased to compensate for this loss of profit. Although workers and investors have alternately achieved a fleeting advantage from each rise in income, no one is any better off finally, as everything in the business sphere has just been hiked up into a higher bracket with no great change in anyone's relative position.

On a national scale the proposition is the same. The Canadian public each year has for its use in maintaining their standard of living the Canadian national income for that year. National income for our purpose, can be said to be the physical volume of production of goods and services in Canada. Rising wages and prices may boost the dollar value of the national income, but their real income is the same. The same physical volume of production (goods and services) is being divided among the parties concerned; inflation has merely resulted in devaluation of the unit of value by which the division is accomplished.

The problem of how to stop the aimless spiral is one which has been troubling governments, economists, bankers and private citizens for a long time. It is not a problem which can be solved by one man or one group; it is one which requires co-operation, understanding and self-restraint on the part of most of the citizens of the nation. Leadership in the effort should come from various groups, attacking different phases of the problem,

depending on what their special qualifications are. The members of the accounting profession can provide leadership and instruction in those parts of the problem in the solution of which their professional skill might be effective.

Our part of the solution to the problem has two phases, one a practical application of our accounting skill, and one a job of education. What we should aim at is simply this: to do whatever we can to provide both parties to the battle of inflation with what they are striving for, namely, a greater return for their effort or investment without achieving it at the expense of any other group: the second part of our effort should be directed at educating both parties whose efforts now contribute to the inflationary spiral that this can be done. Accountants cannot accomplish these ends single-handed, but a steady and continued effort on their part towards these ends might provide the spark of leadership which would bring other groups into the battle line. That is the challenge to the accounting profession.

It will probably appear an ambitious and perhaps impossible goal to try, as we said above, to provide both parties with a greater physical or real income without achieving it at the expense of any other group. There is only one way that this can be done. It is to increase the absolute volume and not merely the dollar value of goods and services to be divided. If there is a bigger pie to divide, there will be more for all to eat.

To reduce this proposition to the field of operations of each of us as members of a business organization, our objective should be to apply our professional skill to increase the productivity of our own business without increasing its costs, or to maintain its productivity and reduce its costs. Now you will say that that is exactly what we are employed to do and what we have been aiming at for years. That is true, but it is also true that during the war and in the seller's market that has existed since the war gross revenues have been very good, and for this and other reasons our cost consciousness has become dulled. Competition in business has been less keen because there has been market enough for all to sell their products. Since the removal of price ceilings, the easiest way to maintain or increase profits has been to increase prices, and in most cases, this course has been followed.

Our aim has always been directed toward net profit. In recent years, we have been able to maintain or increase profits by boosting revenue through increasing prices. Some of our effort has also been directed to reducing costs, but it now appears that if we are to continue to do our best for our management and at the same time to make our contribution to the community in the battle of inflation, we must train our sights with renewed effort on cost reduction and control. Accountants have little control over some factors of cost under to-day's conditions: such factors as the labour rate, and prices of materials and services purchased. But we can effect savings in the use of these and other factors which enter into the cost of doing business, by promoting efficient mill and merchandising practices; by reduction of waste and scrap; by perfecting time and motion studies; by reviewing our statistical reporting methods to make sure that out-of-line costs are spotlighted so that management's attention will be focussed on them and the cause removed; and by applying in every way

our special skills to the improvement of methods and reduction of costs. Our aim should be to place our management in a position where profits can be maintained or increased in the face of increases in uncontrollable elements of costs, without increasing prices. That is our first aim.

The second part of our contribution lies in an attempt at engendering the belief that the ends of labour and investors can both be served best by wholehearted co-operation towards the aim of increasing the return which is to be divided between them. As far as accountants are concerned, this job is one of education of employees towards a better understanding of the financial affairs of their companies.

## In This Issue

We take great pleasure in publishing in this issue an article written exclusively for "Cost and Management" by Professor M. C. Urquhart, B.A., Ph.D., on "The Draft Charter of the International Trade Organization and the Geneva Trade Agreements." The importance of the International Trade Organization to the world economy is well known and possibly no country will be affected by the reciprocal Trade Agreements to a greater extent than will Canada. It is, therefore, very important that accountants should be quite familiar with the purpose of the International Trade Organization and the effect of the Trade Agreements on Canadian business.

Dr. Urquhart is Assistant Professor of Economics at Queen's University and was, during the war a Financial Advisor to the Department of Munitions and Supply. We are indeed fortunate in having such an authority prepare this article for us.

## Dominion Annual Meeting

The Annual Meeting of the Society will this year make a return visit to Quebec City. Many of our members will recall with a great deal of pleasure the successful convention which was held in the historical city of Quebec in 1944, and particularly the hospitality that was extended by the members of the Quebec Chapter.

The meetings will be held on June 11th and 12th and arrangements have been made for boat accommodation from Toronto to Quebec City. This boat trip is in itself most delightful and interesting and when you add the congenial company that attends our Annual Meetings, you are assured of a never-to-be-forgotten experience.

Our reservations are limited and those wishing to travel by boat to Quebec City are asked to send in their reservations to the Secretary-Manager as soon as possible.

# New Members

**Calgary**

Ernest W. Creasy, J. A. Joncas, Calgary, Alta.
Alan D. Southwood, Royalite Oil Co. Ltd., Turner Valley, B.C.
David S. Murison, William Sigalet & Co. Ltd., Calgary, Alta.
R. Menard, Robin Hood Flour Mills Ltd., Calgary, Alta.

**Fort William-Port Arthur**

Roy E. Reedhead, J. E. Crawford, C.A., Fort William, Ont.
V. D. Kyle, Northland Machinery, Fort William, Ont.
Vernon Dicks, Lakehead Motors Ltd., Port Arthur, Ont.

**Hamilton**

Reginald Ott, Canadian Car and Foundry Co. Ltd., Brantford, Ont.

**Kitchener**

G. F. Clendenen, Leland Electric Canada Ltd., Guelph, Ont.

**Kingston**

Robert S. Gray, Canadian Industries Ltd., Kingston, Ont.

**New Westminster**

George R. Bolton, B.C. Distillery Co. Ltd., New Westminster, B.C.

**Niagara**

James P. McKenna, Hayes Steel Co., Merritton, Ont.

**Ottawa**

Ferdinand Schlessinger, Ashton Press Mfg. Co. Ltd., Ottawa, Ont.
J. H. Watts, Office Appliances Ltd., Ottawa, Ont.

**St. Maurice Valley**

J. N. Adams, Consolidated Paper Corp., Grand'Mere, Que.
J. W. S. Griffiths, Consolidated Paper Corp., Grand'Mere, Que.
A. S. McNab, Grand'Mere Knitting Co., Grand'Mere, Que.

**Toronto**

John A. D. Craig, O.B.E., C.A., Snyder Craig & Co., C.A., Toronto, Ont.
James A. Ponder, 408 University Ave., Toronto, Ont.
Charles Sinclair, Tip Top Tailors Ltd., Toronto, Ont.
Frank V. Dunn, The Gilpin Co. Ltd., Toronto, Ont.
George Bullen, Hinde & Dauch Paper Co., Toronto, Ont.
Earl G. Black, Vardon, Punchard & Co., Toronto, Ont.
Charles G. Bunbury, Steel Co. of Canada, Ltd., Toronto, Ont.

**Vancouver**

Byron Lund, Johnston Terminals Ltd., Vancouver, B.C.
Thomas A. Kennedy, Pacific Coast Pipe Co., Vancouver, B.C.
D. Jersey Grut, Canadian Fishing Co. Ltd., Vancouver, B.C.
Arthur B. Chapman, Canadian Pacific Railway, Vancouver, B.C.
Barbara M. Ferris, Department of National Revenue, Vancouver, B.C.
Hazel-Jean Bescoby, Bennett Corporation Ltd., Vancouver, B.C.
Allen L. McDonnell, Progressive Engineering Works, Vancouver, B.C.
George Beveridge, Willards Chocolates Ltd., Vancouver, B.C.
Desmond Burdon-Murphy, Mount Pleasant School, Vancouver, B.C.
Brian T. Parish, Unemployment Insurance Commission, Vancouver, B.C.

Stephen M. Moore, Unemployment Insurance Commission, Vancouver, B.C.
Jack Mellor, National Paper Box Co. Ltd., Vancouver, B.C.
D. Arthur Trainor, Canadian Mixermobile Co. Ltd., Vancouver, B.C.
Robert Douglas, Unemployment Insurance Commission, Vancouver, B.C.
William E. Hutchings, Department Finance, Canada, New Westminster, B.C.
Richard M. Western, Sun Publishing Co. Ltd., Vancouver, B.C.
Elizabeth Wallace, Northern Construction Co. & J. W. Stewart Ltd., Vancouver, B.C.
William R. Lawrence, Canadian (B.C.) Telephones & Supplies, Vancouver, B.C.
Kenneth Nichols, Commonwealth Construction Co. Ltd., Vancouver, B.C.
Emily A. Paulson, United Steelworkers of America, Vancouver, B.C.
Earle F. Currie, Unemployment Insurance Commission, Vancouver, B.C.
Robert B. Barker, Unemployment Insurance Commission, Vancouver, B.C.
Harold F. Dill, Crane & Lodor Service Ltd., Vancouver, B.C.
Wilfred G. Crowther, Unemployment Insurance Commission, Vancouver, B.C.
John D. Moore, Star Steam Landry Co. Ltd., Vancouver, B.C.
William M. Keenlyside, Pacific Bolt Mfg. Co. Ltd., Granville Island, B.C.
Charles P. Dodwell, Dodwell & Co. Ltd., Vancouver, B.C.
Neill E. Clark, Standard Oil Co. Ltd., of B.C., Vancouver, B.C.
Ted P. Dunik, Pacific Business Services, Vancouver, B.C.
Margaret F. McDonald, Restmore Mfg. Co. Ltd., Vancouver, B.C.
E. R. Erickson, Department of National Revenue, Vancouver, B.C.
Geoffrey W. Taylor, Vancouver Daily Province, Vancouver, B.C.
James J. Wallace, Pacific Lime Co. Ltd., Vancouver, B.C.
Harold D. Goard, Dominion Rustproofing Co. Ltd., Vancouver, B.C.
Michael F. Stenson, 1074 Barclay St., Vancouver, B.C.
Agnes B. Collins, Evans Products Co. Ltd., Vancouver, B.C.
Gertrude E. Morrill, Department of National Revenue, Vancouver, B.C.
Robert D. Biglow, 40 East Cordova, Vancouver, B.C.
Edward D. Cope, 173 West 19th Ave., Vancouver, B.C.
Juel G. Jensen, Robertson Hackett Sawmill Co., Vancouver, B.C.
Douglas Henderson, 1864 West 4th Ave., Vancouver, B.C.
George Lam, H. Y. Louie Co. Ltd., Vancouver, B.C.
Robert W. Blair, Sicks Capilano Brewery, Vancouver, B.C.
Gilbert B. Anderson, Alaska Pine Co. Ltd., Vancouver, B.C.
William Smith, Unemployment Insurance Commission, Vancouver, B.C.
Pauline Woodward, Alberta Furniture Co. Ltd., Vancouver, B.C.
Jack Bell, Northern Peat Moss Co. Ltd., Vancouver, B.C.
Gordon M. Drainie, Burrard Dry Dock Co. Ltd., North Vancouver, B.C.
E. R. Hugh Cheney, Marshall Well B.C. Ltd., Vancouver, B.C.
Adrian T. Burr, Duncan Produce Ltd., Vancouver, B.C.
Thomas F. Rose, Department of National Revenue, Vancouver, B.C.

NEW MEMBERS

Ralph H. Smith, Department of National Revenue, Vancouver, B.C.
Jack B. Rutledge, Department of National Revenue, Vancouver, B.C.
Clarence R. W. Rusk, Canadian Sumner Iron Works, Vancouver, B.C.
Alastair S. Davie, Burrard Drydock Co. Ltd., North Vancouver, B.C.

**Windsor**

George W. Pitman, Omer W. Cox & Co., Windsor, Ont.
John M. Church, Firestone Tire & Rubber Co., Windsor, Ont.

**Non-Resident B.C.**

John R. Kennedy, Britannia Beach, B.C.
Earl E. Pederson, Consolidated Mining & Smelting Co. Ltd. of Canada, Kimberley, B.C.
G. F. LeFlufy, Consolidated Mining & Smelting Co. Ltd., Trail, B.C.
A. C. Pudden, Canadian Fishing, White Rock, B.C.

# Chapter Notes

## BAY OF QUINTE CHAPTER

A joint meeting of the Kingston and Bay of Quinte Chapter was held in Belleville, on November 24th.

The speaker of the evening was Mr. M. C. Coutts, M.E.I.C., R.I.A., of the Sangamo Co. Ltd., Toronto, whose address on "An Engineering Approach to the Monthly Operating Statements" was most interesting and informative, explaining the efforts that have been made to devise a method by which periodical statements might be concocted, reflecting a true picture of the industrial, commercial and/or financial situation.

Dr. Moore, of the Stevenson-Kellogg Co., was a welcome unexpected guest.

The regular monthly and Christmas meeting of the Bay of Quinte Chapter of the Society of Industrial and Cost Accountants of Ontario was held in the private dining hall of the Bar B-Q Tavern restaurant, Monday, December 15th, at 6.30 p.m.

John Godwin was then called upon to introduce the speaker of the evening, Col. A. B. Hunt, of Northern Electric Co. Limited. His subject, "Recent Developments in Radio Communications" proved very interesting to members and guests, as evidenced by the questions and discussions that followed.

The highlights in Col. Hunt's talk were his remarks on the progress of communications, especially with reference to the vacuum tube in both wire and radio communication. As recent as 1923, difficulties were experienced in educating people to the use of P.A. systems in auditoriums—a communicating system in common use these days. Talking pictures followed with the same promotion difficulties, but finally moving picture producers were convinced, and the technique was brought to Canada in 1928. Such terms as Radar, Pulse Time, Sonar, Thermister, and Fastex Camera were a few of the specific items briefly reviewed, revealing amazing possibilities in communication and other fields of endeavour.

At the close of his talk, Col. Hunt subjected himself to a lively dis-

cussion period before being thanked by Carl Casey on behalf of the chapter.

The meeting was then thrown open to good cheer and fellowship, as is usual at our Christmas meetings.

## CALGARY CHAPTER

The Program Committee provided members of the Calgary Chapter with an interesting bill of fare for November. The first meeting on November 12th was appropriately entitled "English Stew", and proved to be a highly entertaining aand instructive talk on the peculiarities of the English language. Mr. William Knights, past president of the Calgary Rotary Club, was our guest speaker on this occasion.

On November 26th, the menu was of more solid proportions. Mr. R. L. Bailey, manager of the main Calgary Branch of the Bank of Montreal, gave us an instructive talk on "The Balance Sheet as a Banker Sees It." Despite the strong meat contained in Mr. Bailey's paper, he added a dessert of dry humor, which was quite entertaining. He also proved himself particularly adept in answering numerous questions addressed to him by the members.

At both meetings Mr. Harry Saxton, chairman of the chapter, presided.

## KENT COUNTY CHAPTER

On Thursday, November 20th, Cost Accountants of Kent County Chapter and guests had a real treat. The evening started out by visit at 5.30 p.m. through the plant of Dominion Glass Company, Limited, in Wallaceburg, under the kind direction of one of our members, Mr. William Jordan. After an interesting hour or so in touring this large plant, we went on to Port Lambton, where at Ohio Hotel after dinner we were privileged in having Mr. Archibald Newman, manager of Public Relations Department of Polymer Corporation, Sarnia, speak to us on "Man-made Rubber". This interesting talk was followed by a film on "A Day at Polymer", which gave us a visitor's angle of this 50-million-dollar enterprise at Sarnia. All in attendance were delightfully surprised with a lovely gift of a dozen glasses, courtesy of Dominion Glass Company, Wallaceburg.

## FORT WILLIAM-PORT ARTHUR CHAPTER

The November meeting was held in the plant cafeteria of the Canadian Car & Foundry Co. Ltd. There was 47 members and guests present to hear Mr. M. Laureys, of the International Business Machines of Winnipeg, give a very thorough presentation of the punched card system of accounting. Following the address, the meeting adjourned to the Accounting Machines offices of the Company, where a demonstration of punched card accounting was given. Mr. Laureys was assisted in the demonstration by Mr. Joe Marks, of the Canadian Car.

W. J. Strachan and E. G. Charnock thanked Mr. Laureys and Mr. Marks for their excellent presentation and also Doug. Henderson, through whom such excellent arrangements were made with the Canadian Car. Chairman Rex LeCocq presided.

## LONDON CHAPTER

The November meeting was held at the Hotel London on the 27th, where Mr. A. E. Jubien, of the J. Walter Thompson Co. of Montreal, spoke

on the subject, "Accounting for Advertising". The many questions which followed the address made for an excellent discussion period.

An enjoyable event of the evening took the form of a presentation to C. E. Costain, who had presided over the chapter as chairman for seven years. M. P. McBain made the presentation of a very fine pipe on behalf of the members of the Chapter, as an expression of their appreciation for the many years of faithful service which Ted had given to the Chapter and to the Society.

## MONTREAL CHAPTER

We were privileged on November 28th, 1947, to have as guest speaker, Mr. I. G. Needles, vice-president of the B. F. Goodrich Rubber Company of Canada Ltd., whose subject was "Relation of Cost Accounting to Sales Procedure". Mr. Needles travelled from Kitchener, Ontario, to Montreal, to be with us.

He pointed out that modern business provides cost accountants with an opportunity to present information to management that will be of help in their efforts to run a profitable business. A cost man should also be a good salesman, according to Mr. Needles, who saw a bright future for an accountant who combined sales methods with accounting. Van Harris, chairman of the Chapter, presided. Don Patton introduced the speaker and Romeo Ledoux thanked Mr. Needles for giving of his time.

The last scheduled dinner and lecture meeting of the year was held on December 12th, and was addressed by Mr. Jacques Perrault, B.A., LL.D., who was introduced by Mr. Victor Davies. The subject was "Recent Changes in Labour Legislation", and our speaker gave us a vivid description of the origins of labour organizations and causes of major disputes between labour and management, in Canada and United States. An explanation followed on the aims of the various labour legislations which latitude in wording is intended to try to facilitate understanding and goodwill between the two groups. After answering the various questions pertaining to the subject, by members present, Mr. Perrault was thanked, in French, by Mr. Lucien Bolduc.

At the end of the dinner a desk set was presented to our friend, Randall Herron, who resigned after seven arduous years as assistant secretary-treasurer of the Institute and Chapter. Mr. Percy Wright made the presentation, and in some extremely well-chosen words, expressed the feelings of all the members towards Randall's great work.

Institute officers present were MM. D. R. Patton, president, C. P. Dumas, A. J. Dolbec, P. W. Wright, past presidents, H. Bacon and A. S. Keiller.

## OTTAWA CHAPTER

The regular monthly meeting of the Ottawa Chapter of the Society of Industrial and Cost Accountants of Ontario was held in the E. B. Eddy Company staff cafetria on Thursday evening, December 18th.

Due to the proximity of the festive season the usual business meeting was varied to take the form of a social gathering, games and a liberal supply of oysters taking the place of discussions on costing subjects.

During the evening, prizes ranging from pen and pencil sets to half-pound packages of tea were awarded to various members. The lucky winners were:

Mr. G. Steacy, of Perth; Mr. C. Donaldson, of Montreal; Mr. J. Sykes, Mr. R. S. Davies, Mr. A. A. Stearns and Mr. G. R. O. Wonnacott, all of Ottawa.

Climaxing the evening was a buffet supper, at which time each member present received a shaving set presented by Mr. J. Benson, of Jergens Limited, Perth.

### TORONTO CHAPTER

The regular monthly meeting of the Toronto Chapter was held at the Oak Room on December 4th. This was the occasion of the annual plant visit and the speaker for this occasion was Mr. C. B. C. Scott, assistant vice-president of the Massey-Harris Co. The speaker was introduced by Mr. H. Hetherington and gave a short but comprehensive talk on cost and management. Mr. Scott gave examples of how his company used the information supplied by the Industrial Accountant to guide the Works Managers in cost reduction programs and to assist management in planning for expanding plant facilities.

Following this talk the group adjourned to the Combine Assembly plant of the Massey-Harris Co., which has been built in the post-war period. The modern methods of manufacture, assembly and material handling proved to be of great interest to the members.

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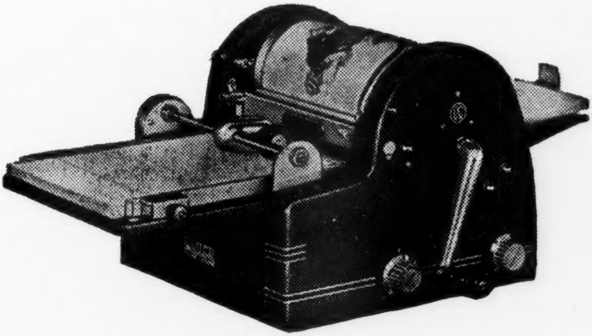
## Chapter Standings for Fernie Trophy

| | Basic Points | Increase Senior Members | Increase Student Members | Point Increase | Percentage Increase |
|---|---|---|---|---|---|
| Vancouver | 161 | —3 | 50 | 44 | 27.3 |
| Lethbridge | 33 | 2 | 3 | 7 | 21.2 |
| Hamilton | 333 | 10 | 47 | 67 | 20.2 |
| Fort William-Port Arthur | 88 | 4 | 8 | 16 | 18.2 |
| St. Maurice Valley | 69 | 4 | 1 | 9 | 13.1 |
| Kelowna | 26 | 1 | 1 | 3 | 11.5 |
| London | 116 | 1 | 10 | 12 | 10.4 |
| Ottawa | 90 | 2 | 4 | 8 | 8.9 |
| Kitchener | 127 | 2 | 4 | 8 | 6.3 |
| Niagara | 100 | 2 | 2 | 6 | 6 |
| Toronto | 441 | 6 | 12 | 24 | 5.4 |
| Windsor | 156 | 1 | 4 | 6 | 3.8 |
| Calgary | 182 | — | 7 | 7 | 3.8 |
| New Westminster | 33 | — | 1 | 1 | 3 |
| Montreal | 483 | —1 | 12 | 10 | 2.1 |
| Bay of Quinte | 35 | 1 | —2 | — | — |
| Edmonton | 151 | —1 | — | —2 | —1.3 |
| Quebec | 120 | —1 | —5 | —7 | —5.8 |
| Victoria | 54 | —3 | 2 | —4 | —7.4 |
| Kingston | 76 | —5 | — | —10 | —13.1 |

NEW CHAPTERS—INCREASE BASED ON INITIAL MEMBERSHIP

| | | | | | |
|---|---|---|---|---|---|
| Kent County | 30 | 8 | 2 | 18 | 60 |
| Winnipeg | 83 | — | 45 | 45 | 54.2 |
| Eastern Townships | 59 | 4 | 17 | 25 | 42.3 |



# Current Literature Digest

By HAROLD BRICKER, C.G.A., R.I.A.

We have again come to the period of the year when management is on trial. The Controller (XV II 564-5) has published several comments on good management. It is essential, to be successful, that our competitive economy must work smoothly, without sputtering and backfiringg.

## THE NEED OF INDUSTRY IS A NEW CONCEPT OF HUMAN RELATIONS

Prosperity was formerly the exclusive goal of better products, more of them, lower prices, mass production, mass distribution. NOW, the goal must include social consciousness, so industry still drives for results, yes, but with a sharper eye on human interest and public relations interest. The average industrialist faces the necessity of realigning his thinking about the factor of public interest. There are still many in industries' high places who continue industries' opposition to collective bargaining, health and safety ordinances, child labor legislation, minimum wage laws, unemployment insurance, social security and universal sickness and accident insurance. This type of thinking is not unusual. There is still too much opposition to everything that spells greater security, well being, or peace of mind, for the little fellow.

The Cost Accountant (26-2-29) quotes Herbert Morrison in speech as saying that from now on, we have all got to become much more price-conscious. That means much more conscious of the supreme importance in our manufacture of good management, high output, and in efficient methods. Unless we quickly set about improving our position in all these respects, and thus lowering our costs, the impact of foreign competition in the export markets will before long shake our national economy to its foundations.

With the recent launching of the greatest-ever drive to send British goods overseas, it behooves the cost accountant to consider how individually and also collectively he may contribute to the solution of the country's economic problems.

Cripps Working Parties' reports make more or less severe criticisms of the "efficiency" of the industries investigated, and their lack of adequate costing arrangements. It is safe to suggest, therefore, that the same remarks might apply to industries which have not so far been examined. This simply means that either management has not given adequate scope or recognition to its cost accountant or that the officer has not and is not executing his functions properly. One may wonder whether, in fact, it is the complexity of the structure and range of the manufactures of some industries, that gives them the superficial air of "muddles", and which has prevented the Parties from finding or agreeing upon a yardstick with which to make comparisons possible across a wide section of apparently similar units.

Collectively and individually cost accountants can make as real a contribution to the success of the country's export programme as can be made by members of the community engaged directly on production. It is an opportunity which neither the profession nor the country can afford to miss.

While this has been written in reference to Great Britain, in many respects Canada and Canadian industrial accountants may be expected to take up "the gauntlet".

## BRITISH GOVERNMENT AND TRADE ASSOCIATIONS, FUNCTIONS APPARENTLY SOCIALISTIC

As Britain's recovery becomes more visible, it would seem that Socialism is merely the means by which British industry is being given, so to speak, a shot in the arm of "MODERNISM". The Cost Accountant (26-2-35) reviews the situation as projected during the after-war period, for application in the reconversion and recovery programme. The following extract from "British Industries", November, 1944, mentions some of the important functions envisaged for these associations in close collaboration between the Government and Industry.

To act as the official channel of communication between the industry and the government on any matter of commercial or economic policy affecting the industry.

To enable an industry to act as a unit whether for co-operation with other industries and other interests, or for dealing with subjects which concern their section of industry as a whole.

To assist in solving the problems that arise when production and consumption get out of step or are subject to dislocations caused by trade-cycle fluctuations.

To maintain fair conditions of trading and to regulate trade practices within the industry.

To enable the industry in this country to negotiate on equal terms with its opposite numbers in other countries.

To collect statistics and promote the interchange of information between members.

To establish efficient and uniform methods of costing throughout the industry.

To promote the development of export trade.

To conduct sales propaganda and publicity.

To encourage individual and promote co-operate research work and keep its members informed of new developments and discoveries in the field of scientific and technical research likely to help them in formulating long-range plans of development.

To promote the technical and general knowledge to those engaged in the industry.

To assist in the improvement of service to the customer and of quality, design and methods of production, and to promote where suitable the standardization of products, and parts of products.

Industrial Accountants, who are more and more being recognized as a profession, are advised, to wisely anticipate, that much of their work in future will be closely related to this programme.

## "BAD DEBTS"

For over five years this subject has been of little interest or importance. However, business activity is slowing up in some commodities and in some respects a recession of some degree is acknowledged if not experienced. We should prepare ourselves accordingly. It is reported that a salesman in a law stationery publishing firm stated that he made, recently, more sales of the forms for "Bankruptcy" in one month than he had made in the previous three years.

It has indeed been said that coming events cast their shadows before them.

## PROVINCIAL CORPORATIONS TAXATION
By GEORGE MOLLER, C.A.

The Canadian Chartered Accountant (LI-6-47) published the above noted article on the accounting aspects of the various provincial taxation methods applied to corporations.

The Ontario form CT 23-1947, the Quebec forms C17, C18, are set out for comparison with the Agreeing Provinces Form TP 2-1947, with no political comment.

The point of interest to us is that this condition is making more work for accountants. The work is not only more, but highly complicated, if not confusing.

The agreeing provinces are keeping their collection, and computation in line with that of the Dominion Government. Ontario and Quebec demand payments in their own peculiar way. The rates of the two provinces also vary. It is another case of where the whole of Canada is "out of step" except Ontario and Quebec, and even they are not in step with each other.

Apart from the fact that the rate Quebec is exacting, is double the rate Ontario demands, the aforementioned feature might easily lead to double tax on the same capital and creates further uncertainty which will prevail in the accounts of all corporations subject to this taxation.

In connection with the capital tax which has to be paid to Quebec for the period from the 2nd September 1947 to the 30th April 1948 based on 1946 capital, Quebec requires complete financial statements for 1946. Ontario will assess capital tax on the basis of 1947 accounts which complicates the calculation of the proportion to be allowed for Quebec and vice-versa.

## THE PREPARATION OF AND SUBMISSION OF ANNUAL BALANCE SHEETS AND ACCOUNTS

The world is growing smaller economically. There is an international aligning of business information, not to mention methods and efficiency, so that business language is becoming more and more universal. This is in evidence in reports of the Secretarial Practice Research Group in the Federal Accountant, Australia (XXIX-10-47), which publish the results of their discussions in the following recommendations.

1. The proper presentation of accounts, in which clarity supplants obscurity can be a valuable contributing factor in Public and Industrial Relations.

2. As Directors are giving an account of their stewardship, there is a moral and ethical obligation to present the facts clearly, quite apart from legal conceptions.

3. The vertical style of presentation provides many advantages over the older and more orthodox style of double-sided accounts. Group relationships can be more clearly expressed in the vertical style, which is appropriate for better balance sheet and profit and loss account presentation.

4. Some of the main group relationships could be expressed as a percentage in the accounts quite conveniently, and without cluttering up the presentation unduly.

5. The review of Company Accounts in the "Stock Exchange Record" is informative and provides some interesting relationships clearly expressed. There is a logical sequence of what profits are available for dividends, what dividends are actually paid, and what accounts are carried to reserve.

6. As an indicator of trend, the use of subsidiary statements annexed to the published accounts is strongly recommended. A five-year comparison of assets, liabilities, shareholders' funds, dividends, and the account of dividend per share, could be provided for the information of all interested parties.

7. The use of slightly heavier type in featuring group headings is recommended. This would provide for clearer reading, and the more ready identification of the different groups.

8. Terminology is very often at fault, and tends to mislead those who read the accounts. Particularly is this so with the average man, and the employee who often thinks of profits as a sum of money held in cash. Why not refer to the "earnings" of the company? "Profit and Loss Account" is a peculiar term, because the result must be one or the other—a profit or a loss—not both.

9. The declaration of a dividend as a percentage on capital is likely to be misunderstood. The better way is to express the dividend at so much per share and as a percentage on total shareholders' funds.

10. Directors' reports and Chairman's addresses are not used, as a general rule, constructively enough. They are not very widely circulated; only a very small percentage are published in full text. Very often the severely abridged report in the newspapers does not do the company full justice. Directors should be prepared to arrange full publication and wide distribution of reports and addresses. A copy of the Chairman's Address should be circulated to all shareholders with the published accounts.

11. Within the bounds of reason, clarity and completeness in the accounts and reports would inspire confidence, and help the public to a better understanding of the affairs of the company and the service it renders to the community.

12. The reports should emphasize more particularly than is usually the case the average shareholding, the relationship between the amount received by the shareholders, the employees, and the tax gatherers. There is much general misconception on these matters, and very erroneous impressions are gained in the absence of any emphasis on the true facts.

13. Interim reports should be provided by the directors. A year is too long a period for interested parties to remain in ignorance of the affairs

of the company. Quarterly, or at least half-yearly, reports should be submitted for publication.

14. The Subsidiary annexed statement is recommended for recording the year-to-year movements in certain account items. This particularly applies to machinery and equipment, buildings, furnishing and fittings, motor vehicles, Reserve Accounts, provisions, and so on.

15. Dividend recommendations should be incorporated in the Published Accounts, and the amount involved shown as a deduction from the resources out of which it is to be paid. Otherwise, the Published Accounts undergo a substantial change almost immediately after they are circulated, and only a misleading picture is available for the ensuing 12 months.

16. All provisions for taxes should be calculated as accurately as possible, and expressed clearly in the accounts as a separate item. There should be no merging with other items so that the identity of the tax provision is obscured.

17. Footnotes should only be used in the Published Accounts when there is no better way of featuring the relevant facts. Sometimes, to try to include the information in the main body of the accounts, would lead to a disproportionate amount of narrative, and detract from the accounts presentation.

18. There is scope for the inclusion in the presentation of the published accounts of a dignified straightout statement of the products handled by the company or of its main undertakings.

19. In the circulation of accounts, the following in addition to shareholders, should receive copies:

(a) Share Brokers and Stock Exchanges;
(b) Selected newspapers and Journals;
(c) Employees—Notice board exhibit if employees are many;
(d) Creditors;
(e) Debtors:
(f) Special avenues depending on the nature of the business.

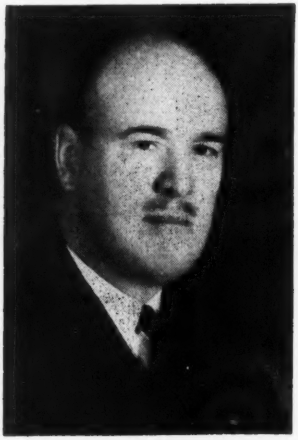
20. The use of the narrative style of presentation should be employed, where practicable, especially as a subsidiary statement in which more informative detail of the accounts may be given in explanatory form, for the benefit of the general public not versed in the reading and understanding of the more legal form of publication.

This may all be old information to those in executive responsibilities, but for those in smaller businesses it may not be so fully appreciated.

The moral for all of us to think about is that while we, in Canada, to-day, are highly competitive in the world markets without products, the same may not be quite so true in a surprisingly few years.

We may have our muskets oiled and our powder dry, but it may soon be a question, in the export market, whether we have better muskets and better powder. Cost Accountants can do much for administration to assure Canadian business that it is a jump ahead of the competitor and, more important, that we stay a jump ahead.

# Canadian Named President of National Cash Register Company



## Company Creates Office of Presidency for the first time in history and appoints Frank E. Wright

The appointment of Mr. Frank E. Wright as President of The National Cash Register Company of Canada Limited has just been announced. This is the first time in the history of the Company that such an office has been held by a Canadian and marks a definite swing to all-Canadian direction.

Mr. Wright, the new President, is Canadian by birth and the son of the late W. E. Wright, former National Cash Register Branch Manager in Winnipeg. He has been practically brought up in the business, starting in Winnipeg in 1919 as office man, working up to Cash Register and Accounting Machine Salesman and eventually succeeding his father as Branch Manager in that city in the year 1934.

Mr. Wright was appointed Manager of the Canadian Sales Division in 1937 and held that position until December 22, 1947, on which date his appointment to the Presidency took effect.

Mr. C. W. Westlake, formerly Branch Manager in Hamilton and more recently Canadian Sales Instructor, has been appointed Sales Manager of the Canadian division, succeeding Mr. Wright in this post.

# The Draft Charter of the International Trade Organization and the Geneva Trade Agreements

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During the summer of 1947 an international trade conference, sponsored by the Economic and Social Council of the United Nations was held at Geneva. The discussions had two important outcomes. The first of these was the preparation of a draft charter for an International Trade Organization, the purpose of which is to establish general rules under which members of the Organization will conduct international trade. This charter is now being considered by a larger group of nations, more than sixty in number, at the World Conference on Trade and Employment being held in Havana at which it is hoped a final form of the charter will emerge. Before being put into effect it will require approval and adoption by the individual countries who wish to become members of the Organization.

The second outcome of the trade discussions is a General Agreement on Tariffs and Trade among many of the nations who were represented at Geneva. Signatories to the agreement include among others the United States, the United Kingdom, France and Canada. This agreement went into effect for Australia, Belgium, Canada, France Luxembourg, the Netherlands, the United Kingdom and the United States on January 1, 1948. One of its features is a set of rules similar to those of the draft charter for the I.T.O. to govern trade relations among the signatories until the I.T.O. becomes effective or, in case that organization is not established, more permanently. The other main feature of these agreements is the reciprocal reduction of tariffs and other trade restrictions on a wide range of items.

It is obvious that the general purpose of the Organization and the Agreements is to abolish, to the greatest extent possible, many of the forms of trade restriction that developed in the interwar period and to lower the barriers that remain. A brief review of the developments of that period will help in making an appraisal of what was accomplished.

In the interwar period, after the countries outside Continental Europe had first removed many of the restrictions imposed during World War I, the first major check on freer trade came with the imposition by the United States of an emergency tariff increase on certain products, largely agricultural, in 1921 and a general large tariff increase in 1922. This came partly as an attempt to overcome the difficulties arising out of the general depression which followed the bursting of the inflationary boom in 1920, partly to shut out a considerably increased flow of goods which was beginning to come from Europe and partly to protect industries which were either newly developed or had become overexpanded during the war. While the effects of this action on European policy are hard to evaluate it seems probable that, coming as it did at a critical time in post-war reconstruction, it lessened the chances of liberalization of European trade.

After the currency of many European countries had become stabilized some progress was made toward removing the quantitative restrictions of the war that had developed among the European belligerents. But to replace them in 1925 and 1926 protective tariffs in Europe were substantially increased by many countries thus also increasing barriers to trade. And in 1929 even before the General depression began agricultural tariffs in the major importing countries of continental Europe were increased still further to try to offset the falling agricultural prices.

The subsequent increases in restrictions came largely as a result of the impact of the general depression. In 1930 the United States in the Smoot-Hawley tariff increased protection to levels as high as at any time in that country's history. Canada, in the same year increased her tariffs to make her a high protection country really for the first time. In late 1931 in an emergency tariff and in 1932 with the imposition of a general tariff the United Kingdom returned to protection after approximately seventy-five years of free trade. In the latter year in the Ottawa Trade Agreements the British Commonwealth and Colonial Empire also established a system of preferences whereby duties on trade within the Commonwealth and Empire were less than those on commodities from other countries. This preferential principle was not entirely new, for Canada had extended Britain preferences since before the turn of the century. A new feature however was the development of "bound margins" of preference whereby members of the Commonwealth and Empire agreed not to reduce the margins of preference by separate negotiations with other countries. Tariff increases at this time were world-wide. The countries referred to specifically are mentioned only by way of illustration.

Probably more serious than the general increase in protective tariffs during the depression was the great spread of the other means of trade restriction. These means had been widely used in Central and Eastern Europe even during the 1920's but were not common over most of the world in that period. Following 1930 they became widespread particularly in continental Europe and Latin America although resort was had to some aspect of them in most countries. Frequently exchange difficulties, i.e. shortages of foreign currencies, were the cause or were used as the excuse, for their imposition. Hence, a common method of quantitative control of trade involved licensing the use of foreign exchange for purchasing abroad. This device was commonly used for protective purposes that were not made necessary for exchange conservation. It was used for arbitrary discrimination among products and among nations. Another device was the development of straight quotas which set a definite limit on the quantity of a commodity that could be imported and which were often allocated among exporting nations in a most discriminatory fashion. Further they were often changed in a most unpredictable manner from year to year. Still other practices which became widely used were general import licensing, differing from the foregoing in that it might not be connected with exchange shortages and no overall quota might be set; the development of bilateral and barter trade agreements among nations, effectively shutting out third countries; and imposition of artificially high valuations on imports for purposes of customs calculation. The result of all these devices was to create a chaotic situation

of discrimination and uncertainty, to restrict greatly the quantity of trade, and to retard general recovery from depression.

A bright ray in this picture, which marks a turning point in American policy, was the enactment of the Reciprocal Tariff Agreement Act in the United States in 1934. By this act Congress gave the Executive, for a three year period, the authority in the negotiation of trade agreements with other countries, to reduce tariffs by as much as fifty percent in return for satisfactory reciprocal concessions. This authority was renewed in 1937, 1940 and 1943. Under it treaties with several countries, including Canada, leading to important reductions in tariffs, were negotiated. Of interest with regard to the recent negotiations at Geneva is the fact that in 1945 Congress passed a new act to extend the American trade agreements program for three years and to authorize 50 per cent reductions of customs duties in effect January 1, 1945.

The purposes of the I.T.O. as set forth in the first article of the draft charter indicate the influence of this experience on the drafting parties. Purposes are stated as being: "(1) To assure a large and steadily growing volume of real income and effective demand, to increase the production, consumption and exchange of goods, and thus to contribute to a balanced and expanding world economy. (2) To foster and assist industrial and general economic development, particularly of those countries which are still in the early stages of industrial development, and to encourage the international flow of capital for productive investment. (3) To further the enjoyment by all countries, on equal terms, of access to markets, products and productive facilities, which are needed for their economic prosperity and development. (4) To reduce tariffs and other barriers to trade and to eliminate discriminatory treatment in international commerce. (5) To enable countries, by increasing the opportunities for their trade and economic development on a mutually advantageous basis, to abstain from measures that would disrupt world commerce, reduce productive employment or retard economic progress. (6) To facilitate through the promotion of mutual understanding, consultation and co-operation the solution of problems relating to international trade in the fields of employment, economic development, commercial policy, business practices and commodity policy."

To attain these objectives devices used for protection are to be limited, insofar as possible, to tariffs. Most-favoured nation treatment is to be accorded by all members of the Organization to all other members. (A nation which extends most-favored nation treatment to another nation agrees to accord it treatment at least as favourable as that given third parties. Thus if a reduced tariff is granted a third party the country receiving most-favoured nation treatment is assured being faced with a tariff rate at least as low.). Despite the most-favoured nation clause preferential tariffs, whereby certain members may give lower rates to certain other members without extending them to all members, are permitted on a limited scale. For example the preferences of the British Commonwealth may be continued. However, limitations are to be put on the amount of the preferences. The Organization is given the power to initiate discussion, among members, for the purpose of lowering tariffs or reducing preferences. Internal taxation and regulations on imports is to be the same as for like domestic products,

except to cover legitimate costs of handling imports; they are not to be used to provide additional protection.

Significant among the provisions of the Charters is the general prohibition of quantitative restrictions on imports and exports . It is realized, however, that in certain conditions a country may be faced with an emergency which can best be coped with only by quantitative controls. Accordingly escape provisions allow use of the latter in specified circumstances. It is hoped to limit the use of these escape provisions to relatively temporary situations.

Thus provision is made for temporary restrictions of exports to relieve or prevent a critical shortage of essential products and for restrictions or prohibition of exports or imports necessary for application of standards and the grading or marketing of commodities entering international trade.

It is recognized that in some instances a country may encounter balance of payments difficulties leading to a serious decline in its exchange reserves. Difficulties of this kind are apt to be particularly great until the maladjustments rising out of the war are overcome. They may also arise from domestic policies to maintain high employment particularly if other countries are not as effective in their employment policies. In such cases quantitative restrictions, to the extent necessary to alleviate the exchange shortage, may be put into effect. If a permanent maladjustment seems to be present provision is made for the Organization to try to arrange for alternative corrective measures to be applied to the member in difficulty or to other members. One such measure could be alterations in exchange rates. All matters involving exchange problems would be dealt with in co-operation with the International Monetary Fund.

An important provision with regard to quantitative restrictions is that they are to be administered in a non-discriminatory fashion. The general rule for allocation of imports of a commodity being restricted is that each supplying country be given the same share of trade as might have been expected in the absence of the restrictions, unless voluntary agreement with the suppliers provide for some other arrangement. However, if the quantitative restrictions are caused by exchange shortages, in some circumstances exceptions to the rule of non-discrimination may be permitted. For instance, if a member country is short of one currency but has a plentiful supply of another, relatively larger imports from the country whose currency is in good supply might be allowed.

There are many other provisions in the charter relating to other aspects of international economic relations. Since they all have the same purpose, to liberalize trade and to make it less arbitrary and discriminating, it will suffice to mention just a few in order to give their flavor. The existence and perhaps the necessity of subsidies especially to stabilize primary commodity industries is recognized, but they are not to be used in such a way as to provide long run protection for an industry, and export subsidies to gain an advantage over another member are specifically prohibited. State trading and monopoly trading in imports or exports are not to be used for protective purposes or to subsidize exports. Anti-dumping duties are to be high enough only to offset the margin of dumping, that is the extent to which the export price is below the domestic price in the country of origin. Countervailing duties by an importing country, to offset the effects of sub-

sidies in exporting countries are to be not more than sufficient to offset the subsidization. Artificially high valuations for purposes of calculating ad valorem duties are not to be used. Provision is made for concerted action to deal with restrictive business practices. International commodity agreements are recognized as having a useful function in some instances but their purpose should be primarily to provide for greater stability in the industries concerned and not for restrictive or discriminatory objectives. Provision is to be made for freedom of international investment and the protection of the investments of nationals of one country in the territory of another.

Disciplinary power of the Organization lies in its ability to withdraw from any offending member the reciprocal privileges which all members have agreed to give one another.

If the major trading countries become members of the Organization—several have already committed themselves to adopt the main features of the charter in the Trade Agreement described below—and if they adhere to the spirit of the charter it will lead to a very considerable improvement in trading relations. The emphasis on the limitation of trade restrictions as far as possible to tariffs is made for a very good reason. The terms and conditions of a tariff are definitely known. Unless other means are used to supplement tariffs—and these other buttresses to tariffs are proscribed in the charter—it is known that if the tariff of a definite amount is paid the commodity may enter into the importing country to compete as best it may in that market. The exporter thus knows the barrier with which he had to contend, and unless the tariffs are prohibitive, he has the hope that by efficient operations he may prevail against them with some success. Further the most-favored nation clause of the charter will assure exporting members of the Organization that they will not lose a market in a member country through special concessions being given competitive exporters.

It is true that high tariffs severely limit trade and it is desirable that they be moderated. Since the I.T.O. charter makes provision only for the Organization to make suggestions to members that negotiations for such a purpose be initiated, its powers in this respect are limited and may not prove to be very effective. In the present instance, of course, tariff reductions are provided for in the Trade Agreements discussed below. It is also true that tariffs that are subject to frequent change do cause an uncertain trading situation. But usually tariffs are not subject to continuous alteration. And those rates that are established by reciprocal trade negotiation are bound ordinarily against increase for a specific period of time. On the other hand quantitative restrictions are not characterized by the same degree of definiteness with regard to conditions and tenure. For example, import licensing readily lends itself to arbitrary and discriminatory treatment, it being possible for a license to be granted in one instance and refused in another under almost identical circumstances, or a barter trade agreements between two countries may shut off a traditional market of a third country.

The insertion of the escape clauses, allowing quantitative controls in unusual circumstances, is to permit a country to take immediate action if there is threat of serious harm to all or parts of its economy. If their use is limited to this purpose they are a desirable feature of the charter. As an illustration, it is easy to envisage circumstances in which a country might run short of exchange reserves. If caused by a deep-seated maladjustment

some basic cure such as perhaps alterations of the exchange rate would be necessary, but if of a temporary nature careful husbanding of exchange reserves might meet the situation with the least dislocation of trade. Such a situation might arise if a country's domestic policy is more successful in maintaining employment than are those of its customers. In that event purchases from abroad could quite readily exceed sales abroad even though they had been previously balanced when prosperity was more general. Inasmuch as the charter states as an aim of policy the maintenance of high levels of employment it would seem proper that the more successful country should be in a position to protect its exchange position and to prevent a situation abroad from diminishing the effectiveness of its own internal employment policy. There are numerous other instances, such as in the sudden emergence, in large quantities, of a competitive product or in attempts to stabilize the income of the producers in industries where supply is not readily adjustable to demand, which might justify similar action to alleviate the effects of rapid and wide fluctuations.

The great danger of the escape clauses is that they may be used not to meet special situations but purely for protection in the general sense of the word. If so used quantitative controls may re-emerge with the same effects experienced in the interwar period. The disciplinary powers of the I.T.O. may prove effective in the usual course of events since the withdrawal of the privileges of a member, particularly the right of receiving most-favoured nation treatment, might be a serious loss. However, there are limitations to the effectiveness of these disciplinary powers. Firstly, the determination of a special condition will be a matter of judgment based upon facts that may not be too clear and of which the members applying for consideration may have knowledge not available to the Organization. It may therefore be difficult to establish clearly whether the action is reasonable or not. Secondly the Organization is apt to be reluctant to discipline large members since their withdrawal from the Organization would seriously impair its effectiveness. Thirdly, in some circumstances, particularly in the case of serious depression, it may appear to members (perhaps quite erroneously) that their gains from departing from the rules of the Organization would be greater than the losses suffered from withdrawal of privileges. To a large extent the Organization's effectiveness will depend on the lead given by larger members. In this regard it is encouraging that the United States which has taken the lead in the recent negotiations appears to be ready to accept much of the responsibility of making the plan work. Prior experience would seem to indicate that, given the assurance of favourable action by the United States, the United Kingdom, once she is able, will do her part.

Turning now to the General Agreement on tariffs and trade, little need be said about the part establishing rules of conduct among the signatories. In general these rules are much the same as those set forth in the I.T.O. charter. Of course, at the present time, while restoration of normal conditions of trade is far from complete, the escape provisions are widely used. The regulations of this part are designed to perform the same functions as those of the charter of the I.T.O. and will be superceded by them if and when the I.T.O. is established. This arrangement differs from the provisions of the I.T.O. charter mainly in that no central body is estab-

lished and no disciplinary powers are created. It is of importance, however, that the countries signing the Trade Agreement have accepted the set of rules regardless of whether the Organization is established or not.

The other main aspect of the Trade Agreements was the establishment of new tariff rates. These new rates were arranged, in each instance, by direct negotiation between the trading countries most interested in the commodity concerned. However, except in the case of preferential rates, they apply to all countries receiving most favoured-nation treatment. Thus the United States would negotiate its rates on lumber or aluminum with Canada its main source of external supply of these commodities; it would negotiate its rates on wine with France. These rates, once established would then apply to all countries who have signed the Trade Agreements and to other countries who have most-favoured nation treaties with the United States. The new rates went into effect for the countries previously mentioned on January 1, 1948 and are not to be increased at least until after January 1, 1951. In the case of the United States further approval by Congress will not be necessary since the Executive had been given the power, in Act of 1945, to negotiate such changes as have been provided for. In some other countries, for instance Canada and the United Kingdom, parliamentary sanction will be necessary; owing to the form of government of these countries it seems reasonable to anticipate that the legislature will endorse the action taken.

The rate changes, insofar as they affect Canada, are characterized by two features. Firstly there has been a widespread and, in many instances, substantial reduction of most-favoured nation rates. And in several cases where rates have not been changed or where there is at present no tariff an undertaking that there shall be no increase while the agreements are in effect has been given. Secondly, by agreement with the United Kingdom, many margins of preference have been reduced, and at least equally important, the "bound margin" aspect of preferences has been eliminated. Canada and the United Kingdom will now be able to reduce most-favoured nation rates with any country without being restricted by the necessity of maintaining a fixed margin of preference for one another. This is of particular importance to Canada who has found the bound margins a serious obstacle in trade negotiations with countries outside the Commonwealth.

Among the advantages gained by Canada those connected with concessions granted by the United States are most important. In the agricultural group United States concessions are granted on well over 100 commodities, the maximum reduction of 50 percent being effective for many of these. The duty on wheat is reduced from 42 cents to 21 cents per bushel and that on flour from $1.04 per barrel to 52 cents per barrel. Quotas on wheat and flour, which had been relatively small, are removed. The effect of these reductions will depend to a considerable extent on the general price of wheat. A duty of 21 cents when wheat is at say $2.50 per bushel is relatively small. If the price should fall to say 75 cents per bushel the duty will be much more restrictive since the spread between Canadian and American wheat prices would most probably be cut if the price were low. The amount of wheat sold to the United States will also depend on the attractiveness of European markets. It would appear that, in the ordinary course of events, and if wheat prices are not at very low levels, that the United States might

buy significant quantities of spring wheat, especially when European purchases are small. Of course, effects will not be large while the present arrangements to supply large quantities of wheat to the United Kingdom and Europe exist.

American duties on coarse grains are also reduced by 50 per cent, for oats from 8 to 4 cents per bushel, for barley from 15 to 7.5 cents and for rye from 12 to 6 cents. Hay is cut from $2.50 per ton to $1.25 and there are many other reductions on less important hay and grain products. These reductions are not apt to have the same quantitative effect as those on wheat since the original rates were not relatively as high. They may lead however to some increase in volume traded and will tend to reduce the margin between Canadian and American prices.

In the livestock and livestock products group the most important American concessions relate to cattle and beef. The United States tariff had previously admitted a 225,000 head of cattle and 100,000 head of calves annually at a rate of 1.5 cents per pound. For numbers in excess of these amounts (called "tariff quotas") cattle were taxed at 3 cents per pound and calves at 2.5 cents. The rates within the tariff quota remain at 1.5 cents per pound for both cattle and calves but the cattle quota is increased to 400,000 head and that for calves to 200,000 head. Rates beyond the quota are 2.5 cents for both cattle and calves. It is difficult to judge the potential effects of this increase in quotas since from early in the war to the present an embargo has been placed on the shipment of cattle to the United States. In prewar years, when cattle prices were much lower, the smaller quota of that time was not always filled. If the embargo were lifted with the present high prices of cattle in the United States, no doubt substantial numbers of cattle would move but it is quite possible that the quotas might not be filled at first and that the main effect would be to increase Canadian prices to equality (allowing for the tariff) with those of the United. The expansion of production that followed might then be sufficient to make the increased quotas of considerable significance. As in the case of wheat the significance of the changes depends to a considerable extent on the general price of cattle; they will be of more significance when cattle prices are high.

Of comparable or greater importance is reduction of the United States import duty on beef and veal from 6 cents to 3 cents per pound. The official press release on the agreements points out that in 1927 when the American duty on beef was 3 cents per pound Canada exported 53 million pounds or the equivalent of 100,000 head of cattle. If trade on this scale is restored by the new rates, as seems quite possible, the packing industry will benefit and the pressure on the livestock quotas, if any, will be reduced.

On softwood lumber the American levies including both the tariff and the Internal Revenue Code which had the same effect as a tariff, have been reduced from $2 per thousand board feet to $1 per thousand. Under present circumstances this reduction would not have much effect since Canada has not been able to provide as much lumber as the United States market would absorb. Further, the price of lumber is now sufficiently high that a reduction of $1 in the tariff barrier would have a relatively small effect. When markets shrink, for instance if purchases by the United Kingdom decline, and if prices fall by any great amount, the rate changes can have considerable effect in improving the market for the relatively large amount of lumber

that Canada has available for export. Canadian exports of boards and planks, which in the main were of the type affected by the rate reductions, in 1939 amounted to $49 million of which 35 per cent went to the United States. In 1946 they amount to $125 million with 48 per cent going to the United States.

Of the other concessions of the United States as they affect Canada, the most important are the reduction of tariffs on base metals. The duty on nickel ingots and pigs is lowered from 2½ to 1¼ cents per pound, and on nickel bars and rods from 25 per cent to 12.5 per cent ad valorem. Rates on aluminum metal and alloys are reduced from 3 to 2 cents per pound and on plates from 6 to 3 cents. On copper ore and refined copper the Internal Revenue Code tax is cut from 4 cents to 2 cents per pound. The duty on zinc ores is reduced from 1.2 cents per pound to 0.75 cents and on zinc pigs from 1.4 cents to 0.875 cents per pound. Except in the case of nickel, of which Canada is the world's major provider, these tariffs were all sufficiently high to provide substantial protection to United States producers. Therefore the relatively large reduction of rates should have a significant effect in increasing the ability of Canadian producers to sell in American markets. This is all the more important since Canada's market for these metals has been shifting from the United Kingdom to the United States as the latter becomes an increasingly deficient area in these products.

Much less attention can be given herein to concessions obtained by Canada from other countries. They are in general much less important than those granted by the United States both because the volume of trade affected is smaller and because the rate reductions are generally less. However, a few changes deserve brief comment. France has agreed to a reduction on the protection given domestic producers of wheat of sufficient size that it appears that she may become a substantial importer; the French duty on aluminum ingots is cut from 35 per cent to 21 per cent, that on aluminum bars and wires from 30 per cent to 15 per cent; and the duty on many types of agricultural machinery are reduced from previous rates of 20-25 per cent to 15 per cent. Belgium, the Netherlands, Luxembourg and Czechoslovakia have made important reductions in tariffs on fresh apples and Brazil is to reduce sharply a previously high tariff on dry salted codfish.

The above changes have been singled out for special attention because Canada is in a favourable competitive position in the production of many of the commodities affected, because the rate reductions have been relatively large, and because therefore Canada would appear to be in a position to obtain substantial gains in trade both in volume and price. Numerous other alterations are worthy of mention but must be left out for the present. They cover many grains and vegetable and forage crop seeds, seed potatoes, dairy products, poultry products, fresh and processed fruits and vegetables, nursery stock, furs, forest products, fishery products, minerals and metals, chemicals, and a wide range of manufactured goods.

Canada herself has made concessions to other countries, of course, in return for the benefits she has received. One element in her concessions, namely the reciprocal abolition of the bounds margins of preference with the United Kingdom, is not evident in the changes in her own tariff schedules. The abolition of the "bound margins" has helped Canada in her negotiations with other countries. It has also meant the reduction or aboli-

tion of some margins of preference that Canada has received from the United Kingdom; and some margins of preference received from other parts of the Commonwealth have also been reduced. For example, the preferences formerly received from the United Kingdom on apples and on chilled and frozen salmon have been eliminated and the preference given by Australia and New Zealand on canned salmon has been reduced. The preference given by the United Kingdom on agricultural tractors and on certain machine tools and parts has also been eliminated. In most instances the reductions of preferences in both Canada and the other parts of the Commonwealth have involved a lowering of the most-favoured nation rates rather than an increase in preferential rates. Thus the effects of the loss of preference should be minimized for while it means increased facility of access by Canada's competitors to Commonwealth markets the duty which must be paid on Canadian goods has generally not been increased. The reductions of those preferences that have so far been affected will lead to increased competition with other sources of supply and perhaps some loss of markets to them but on the whole does not appear to be a serious matter to Canada as for most of the commodities concerned she is in a fairly strong competitive position. It is possible that if new reductions, such as for instance on farm machinery, are made they might be felt more seriously.

Canada has reduced her most-favoured nation rates on 590 items; in the case of about 50 of these the new duties are below previous British Preferential rates. In addition there have been direct reductions of British Preferential rates on about 100 items. In many cases the margins of preference have been reduced or eliminated. A good tabular summary of most of the changes is given in Financial Post for September 29, 1947; only the most important are mentioned herein. The largest reductions are made on commodities which are not competitive with Canadian products or in production of which Canada has a strong competitive position. For instance on many agricultural items which Canada produces tariffs are lowered to match those of the United States, a change which should not have much effect on Canadian producers except in isolated instances. Rates on aluminum have also been lowered to match those of the United States. Products which Canada does not produce, on which duties have been greatly lowered or eliminated include tea, coffee, citrus fruits, dried prunes, which are placed largely on the free list. In addition many fresh fruits and vegetables out of season are imported free during the off season for Canadian production. These reductions will result in lower prices for Canadian consumers and should lead to substantial increases in the quantities imported.

On most other commodities on which concessions are made the reductions are moderate amounting to about 15 to 20 per cent of existing tariffs. Thus for items on which the tariff has been at say 25 per cent ad valorem this means a reduction to about 20 per cent. While these changes will improve the competitive situation of foreign producers in the Canadian market and will lead to some increase in imports they do not appear to be of a nature to cause difficulty for Canadian producers.

It is difficult to assess the extent to which those reductions of Canadian preferential margins that have been made will affect sources of supply. A Financial Post analysis in the issue of November 29, 1947 indicates that in most cases in which the margins have been lowered the United Kingdom

is not at present an important source of supply. By far the most important commodities affected are anthracite coal, oranges (which have been practically free since 1941) and cotton piece goods. The reduction per ton on anthracite coal of 50 cents is not large at present prices and if Britain again becomes able to export coal she should not be too seriously affected by the change. The United States has typically been Canada's main source of supply of oranges. In cotton piece goods the situation is somewhat different. While the United States at present has been providing most of the Canadian imports, the United Kingdom prior to the war had been an important supplier. She should have large quantities available for sale again as she recovers from her current difficulties. The loss of the Canadian preference will make it more difficult for her to recover her traditional position.

On the whole, from the Canadian viewpoint, the results of the Geneva conferences appear to be very satisfactory. The establishment of a set of rules for conducting trade and the reductions of tariffs will benefit all countries. Canada should benefit considerably in her export trade. The concessions she has granted other countries have enabled her to do her part in expanding markets for other countries and to provide Canadians with cheaper goods, without at the same time jeopardizing parts of her economy. To a large extent, for all nations, the expansion of income, of the standard of living and of markets, that should result from freer multilateral trade, should minimize the impact of the changes on particular segments of an economy. And while many of the new arrangements cannot go into effect at once owing to difficulties growing out of the war it is to be hoped these are of temporary duration. It is particularly gratifying that in contrast with what has happened after most other conflicts in the last 200 years trade barriers are presently being reduced rather than increased.

# Annual Meeting

### THE SOCIETY OF INDUSTRIAL AND COST ACCOUNTANTS OF ONTARIO

The Windsor Chapter will this year be hosts to the Ontario Society on the occasion of their Annual Meeting to be held at the Prince Edward Hotel on May 28th and 19th. A very interesting programme is being arranged including two technical sessions. The fact that the Windsor Chapter will be our hosts is in itself an assurance of an interesting and profitable programme and a grand reception will be in store for all those who can attend.

# Job Costs in an Assembly Type Industry

By J. NORRIS, L.C.M.I.

## INTRODUCTION

This Thesis is presented to describe the methods used to accumulate Job Costs in an Assembly Type Industry.

The cost methods employed are discussed under a number of headings, namely:—

1. Material.
2. Labour.
3. Overhead and Flexible Expense Budgets.
4. Production Control, Work in Process, Finished Parts, Finished Sub-Assemblies and Finished Products.

## MATERIAL

To establish the material control that it is possible to secure under this type of Standard Cost System, it was first necessary to determine and set standards for the quantity and quality of raw material necessary to manufacture each finished part and for the quantity of finished parts required in the sub-assembly and the final-assembly of the various products sold to the consumers. After having given due consideration to necessary allowances for scrap, bills of materials were prepared by the Engineering Department to cover the manufacture of all finished parts. Bills of materials were also prepared to govern the quantity of specified parts required in the sub-assembling and final-assembling of the finished products.

Specification and quantity standards having been determined, Purchase Price Standards then had to be established. With the knowledge, that the outside factors affecting the fluctuation of prices were even greater than those affecting the quantity and quality of the raw material, the greatest possible care had to be taken in setting the price standards. The fact also that under this cost system, the variances are taken up prior to the entries to the work in process accounts, made the accurate determination of these standards more important. Having the foregoing in mind, it was necessary to make a careful study of the prevalent factors entering into and affecting the purchase price of materials. Studies were made of past purchase prices; the trend of the prices was taken into consideration insofar as was possible; differential prices allowed on the purchase of larger quantities of material were studied together with available storage facilities and the fulfilment of the production budgets.

When the material quantity and price standards were established, suitably coded and indexed manuals were prepared. Copies of the Standard Price Manual were retained by the Purchasing Department and copies of both the Standard Quantity and Standard Price Manuals were delivered to the Production Planning Department, the Engineering Department and the International Business Machine Tabulating Department.

Standard sets of instructions were prepared to govern the preparation and handling of the purchase requisitions, purchase orders, receiving reports, return shipments, invoices, stores requisitions and material returned

to stores. The actual preparation and disposition of these items is next discussed in order to point out the importance of each in securing the material control.

The purchase requisitions are prepared, in triplicate, by the Production Planning Department. One copy of the requisition being retained on file in the department and one each of the two remaining copies being forwarded to the Stores Record and Purchasing Departments respectively. The responsibility for the preparation of the purchase requisitions was placed with the Production Planning Department, having in mind the knowledge that material specification changes and the quantities required to fulfil production budgets were better known and more readily available to this department than to the Stores Record Department; wherein under many types of cost systems, the requisitions are usually prepared. The Stores Record Department is not, however, entirely relieved of this responsibility, for it remains their duty to advise the Production Planning Department when the balance of any material item has reached the minimum balance requirement allowed. It is also the responsibility of the Stores Record Department to determine that a copy of the purchase requisition, is received from the Purchasing Department within a reasonable time limit.

Upon the receipt of the purchase requisitions in the Purchasing Department, five copies of the purchase order are typed. The original copy is mailed to the supplier, one copy remains in the Purchasing Department and one each of the three remaining copies is forwarded to the Receiving Department, Stores Department and the Stores Record Department.

When the material is received from the vendor, it is checked by the Receiving and Inspection Departments, as to the quantity and specification, against the copy of the purchase order. Quantities received are noted on the copy of the purchase order, which is removed from the open order file when the quantities ordered have been received in total, and is then placed in the closed order file. Five copies of the receiving report are prepared, one copy is retained in the Receiving Department and is attached to the copy of the purchase order; one copy is forwarded, with the material, to the Stores Department; the three remaining copies are sent to the Purchasing Department.

The Purchasing Department checks the receiving report against the purchase order. Quantities received are noted on the order and if the order is completed, it is removed from the open order file and is placed in the completed order file. One copy of the receiving report is attached to the purchase order. The two additional copies of the receiving report are placed in the approved for invoice file. Upon receipt of the vendor's invoice, the receiving reports are removed from the file and after the quantities have been checked against the invoice and the prices as shown on the invoice have been checked against the prices quoted, one copy of the receiving report is costed at the actual price and is forwarded to the Tabulating Department. The remaining copy is attached to the invoice and is sent to the Accounts Payable Section of the Tabulating Department.

When it is necessary to return material to the supplier, four copies of the return shipment form are made out by the Receiving Department. One copy is retained by the Receiving Department, three copies are sent to the Purchasing Department, wherein one copy is attached to the purchase

order; two copies are priced, one being forwarded to the Accounts Payable Section of the Tabulating Department, in order that credit can be secured from the supplier; the other copy is forwarded to the Material Section of the Tabulating Department.

Material requisitions are prepared and issued by the Production Department. The production orders having been standardized; that is, authorizing the manufacture of standard quantities of parts or a standard number of sub-assemblies or assemblies; the material requistions are issued for standard quantities of raw materials or finished parts. Provision is made, however, for the storekeeper to change the quantities contained on the requisition, when it is not possible, on account of the nature of the raw material, to issue the exact standard quantity. The Production Department is protected from the responsibility for unwarranted changes by retaining a copy of the requisition on file in the department. Tabulating Cards are used for requisitions. These cards are furnished in pad form, the card forming the original copy and paper copies being provided for the two other copies required. All copies can be written up at the same time in the ordinary manner. One copy is retained by the Production Department, the original and copy being forwarded with the production order to the Planning Department and from there to the Stores Department. The return of over-issues of material and material issued in error are accounted for by the preparation of material returned to stores cards.

The Storekeeper, upon receipt of the requisitions, issues the material required and retains on file the original copy of the requisition. The duplicate copy is sent with the material to the machine center, where it is signed by the foreman receiving the material; it is then returned to the Stores Department. The copy of the requisition is kept on file in the Stores Department, and the original is forwarded to the Stores Record Department.

The Stores Record Department clerks price the requisitions at the actual cost of the material and forward them to the Tabulating Department.

The requisitioning of indirect materials follows the same procedure, with the exception that the requisitions are prepared by the foremen in charge of the machine centers or by other authorized persons.

The material variances and balances from which the material control is obtained are computed in the Tabulating Department. An outline of the procedure used in this department is presented next, in order to point out the comparative simplicity to compute the accounting figures, which would otherwise require a considerable clerical staff.

Two sets of Standard Master Tabulating Cards were first prepared. The first set was prepared from the information contained in the Standard Price Manual. The material code number and standard unit price being key-punched into a separate card for each size and type of material. The second set was prepared from the Standard Quantity Manual. One card being key-punched for each different part, sub-assembly and assembly; and containing when completed, the material code number; part number, sub-assembly or assembly number; standard quantity, standard unit cost and the standard total cost. The two sets of cards are kept on file in the Tabulating Department, alterations being made to the cards, only when changes are made to the standard manuals.

## JOB COSTS IN AN ASSEMBLY TYPE INDUSTRY

From the sources of original entry, previously mentioned, that are received in the Tabulating Department, the following information is key-punched:—

Inventory Balance Cards

1. Date
2. Material Code Number
3. Part, sub-assembly or assembly number
4. Actual Quantity
5. Actual Unit Cost
6. Actual Value
7. Standard Unit Cost
8. Standard Value

Material Requisition

1. Date
2. Material Code Number
3. Account Number
4. Production Order No.
5. Part, sub-assembly or assembly number
6. Machine Center Charged
7. Actual Quantity
8. Actual Unit Cost

Receiving Report Cards

1. Date
2. Material Code No.
3. Account Number
4. Production Order Number
5. Part, sub-assembly or assembly number
6. Quantity Received
7. Actual Unit Cost

Materials Returned to Stores

The same information as is key-punched from the material requisition.

Material Returned to Vendor Cards

The same information as is key-punched from the receiving report.

It should be noted in this connection, however, that it is not always necessary to key-punch all of this information; for example; unless the material was purchased to be used directly for a particular production order there would be no production order number to be punched.

. It is then necessary to determine the standard cost of the material received and returned. Under this system the same cards for both standard and actual costs cannot be used, due to the fact that the considerable amount of accounting information that is required, does not leave sufficient space. It is therefore necessary to prepare a duplicate card to obtain the standard cost figures. It is possible to reproduce a standard cost card, which will contain all information correspondingly in the actual cost card and at the same time eliminating the actual unit cost and extended amount figures. The pricing and extending of the standard cost cards at standard cost figures is an automatic operation. Using the standard cost cards and a Collator, the corresponding master price cards are selected from the file and are merged in front of the standard cost cards. The gang punching principle of the Reproducer, Summary and Gang Punch Machine is then used to automatically punch the standard unit price from the master price cards into the standard cost cards. The standard cost cards are then extended by the multiplier at the actual quantity received or returned by the standard unit price, to obtain the standard cost of each class of material involved.

The corresponding inventory balance cards are then selected from the file and are merged with the actual and standard cost cards. The cards having remained in material code number sequence, are used in conjunction with Tabulator to print a report showing the receiving report or returned shipment order number, quantity received; standard unit cost, actual unit cost, standard value, actual value; stock balance on hand, valued at both standard and actual cost. The material returned items are designated by a credit symbol. This report is printed on a specially treated paper, which when used with a Transfer Posting Machine, makes possible the transfer of the printed information, to the stock record forms. The balances mentioned are automatically computed by the Tabulator and at the same time the balances for each material item are punched into a new stock balance card by a Reproducing, Summary and Gang Punch Machine connected to the Tabulator. The new stock balance cards are placed in the file to be used when additional material transactions take place.

The procedure for the material requisition and material returned to stores cards, is the same as that for the receiving report and material returned to vendor cards, with respect to sorting in material code number sequence, extending the actual quantity by the actual unit cost and the reproduction of a standard cost card from the actual cost card. The Standard Master Quantity Cards are then selected from the file and are merged in front of the standard cost cards. The standard quantity, standard unit cost and the standard value are punched from the master cards into the standard requisition and material returned cards. The actual and standard cost cards are then merged with the stock balance cards, to prepare the transfer posting report to post to the stock record forms; the quantities issued, quantities returned and the actual balances on hand; at both standard and actual costs. As before the computing and punching of the balances is performed by the machines.

The foregoing procedures include an effective control over the possible loss of forms or cards in transit to, and while in the Tabulating Department. The forms and cards are numbered in numerical sequence and when the accounting information has been key-punched into the cards, they are sorted in that sequence. A Tabulator equipped with a missing card device is then used to secure a printed record, showing the number preceding and following the number or numbers that are missing. All missing cards have to be located before the reports are printed.

Mention has been made concerning the posting of the material balances to the stock record forms. From the balances that are posted, it can be readily understood that a perpetual inventory forms an important part of the material control. The Storekeeper is required, upon instructions received from the Stores Record Supervisor, to take actual count of certain material items. The actual inventory as reported should agree with the balances as shown on the stock record forms.

To calculate the material variances no additional cards are needed. The Material Price Variance Adjustment is arrived at from the standard and actual receiving report and material returned to vendor cards. Utilizing the subtraction principles of a Tabulator, the variances, both favorable and unfavorable are automatically obtained, by determining the difference between the extended amounts contained in the standard and actual cost cards.

Variances are shown on the printed report, for each class of material, the total of the variances providing the figures for the Price Variance Adjustment Entry.

The standard and actual material requisition and material returned to stores cards are used to obtain the material quantity and price variances. A material cost variance, arising from the use of substitute materials, having a different standard cost value, can also be obtained. The material quantity variance is secured by calculating the difference between the actual quantity used and the standard quantity, this difference is then multiplied by the standard unit price. Material quantities requisitioned to replace material spoiled in process are also included at standard cost in the quantity variation. To obtain the material price variance, the actual quantity is extended by the standard unit price and by computing the difference between that extension and the extension of the actual quantity by the actual unit price. It is first necessary to obtain the material requisitions covering the use of substitute materials before the material cost variance can be accounted for. When substitute materials are not used, it follows that the part number and material code number must both coincide with the same numbers contained in the Master Quantity Card. Upon the use of substitute materials, the part number would still agree but the code number would differ. Using a Collator, it is possible to select out the requisition cards that are not in agreement with the master cards, both as to the part and material code number. The difference between the standard unit cost of the standard material ordinarily used and the standard unit cost of the material used is extended by the actual quantity of material used, the resultant product being the variance arising from the use of substitute materials. The calculation of the price variance, includes the price variance for indirect materials. The indirect material quantity variance is adequately provided for in the expense budgets.

When the variances have been calculated, a printed report is obtained from a Tabulator, indicating each type of variance for each class of material. A similar report, showing the variances for each production order, is also easily obtained by sorting the same cards in production order number sequence.

The charge to work in process for the material consumed is made at the standard cost of the standard quantities of standard material required in the manufacture of a standard production order. All variances from these standards, as previously mentioned, are taken up in variance accounts. The total charge to the work in process account is obtained from the standard requisition cards. The total of the cards, for direct materials, less the total of the material returned to stores cards, providing the debit to work in process and credit to the material stores or finished parts accounts. The net total of the standard requisition cards, for indirect materials, furnishes the debit to the manufacturing expense control account and the credit to material stores.

## LABOUR

Standards were also established for labour. After time and motion studies had been made for each of the operations performed in the different machine centers, sub-assembly and assembly lines; standard operation

time allowances were set up for each operation. Having in mind the nature of the work performed and the type of machines employed, standard hourly rates were established for each machine center, sub-assembly and assembly line. Knowing the standard time for each operation, and the machine center in which that operation would normally be performed, standard labour costs were established for each operation by extending the standard operation time allowance by the machine center standard hourly rate. Standard labour costs were similarly set up for the operations involved in each sub-assembly and assembly. The total standard labour cost of all the operations necessary in the production of a particular part, provided the standard labour cost of that part. The standard labour cost of each sub-assembly and assembly were likewise obtained. Standard Labour Cost Manuals were prepared, copies of which were furnished to the Production Department, Planning Department and Tabulating Department.

In order to compute the labour costs and variances, several sets of master cards had to be prepared and maintained on file in the Tabulating Department. A master labour cost card file was established from the Standard Labour Cost Manual; one card being key-punched for each operation and containing when completed: the part, sub-assembly or assembly number; machine centre, sub-assembly line or assembly line number; the standard time allowed; the standard hourly rate and the standard cost. Changes are not made to this file unless changes or revisions are made to the manual. A master employee card file is also maintained, the cards for this file being prepared from the employee's application for employment form. Each card when key-punched, containing the employee's name; clock number; home machine center, sub-assembly line or assembly line number; occupation and guaranteed hourly rate. Changes, additions to and deletions from this file are made from new employee's application forms; transfer forms; guaranteed hourly rate change records and pay-off or resignation slips.

Before discussing the manner in which the labour hours are recorded, it is necessary to define several of the terms used. Home Machine Center, refers to the center in which the employee is normally employed and in which contact is made with the employee for wage payment etc. Machine Centre Worked has reference to the machine center in which the employee actually worked. In this latter connection, it is possible for an employee to work in two or more machine centers during a weekly pay period; although this is not the usual practice, it does occur, particularly when there is a shortage of work in a center. If, however, an employee is permanently transferred from one machine center to another, a transfer form is made out, to change the home machine center number on all records for that employee. The same definitions apply for the terms Home Sub-Assembly, Sub-Assembly Worked; Home Assembly and Assembly Worked.

The total attendance hours for each employee are recorded on clock cards, there being provision for the registration of the daily in and out time by the time clocks. The clock cards are also Tabulating Machine Cards; the employee's name, clock number and home machine center number are automatically punched into the cards by reproduction from the employee's master card file. The clock cards are extended daily and the regular and overtime hours are noted on the cards. At the end of the

weekly pay period the daily extensions are totaled to obtain the total regular, overtime and total hours. The weekly totals are then key-punched into the cards.

Weekly time cards are automatically prepared for each employee in the same manner. These cards contain the date of the pay period, the employee's clock number, home machine center and machine center worked numbers. The cards are prepared by the Tabulating Department, prior to the pay period and are distributed to the home machine centers. The home and worked numbers in these cards are the same and should it be necessary for an employee to work in a center other than his home center, there would not be a prepared card for him there. When such is the case, it is necessary for the shop clerk to write a card, secured from a supply of blank cards kept on hand. The prepared cards are used to record direct labour time only. The indirect labour time is recorded on blank cards supplied to the centers by the Tabulating Department. The shop clerk prepares a weekly indirect labour time card for each class of indirect labour worked on by each employee.

The daily time of each productive employee is entered on the direct labour time card. No record is made on these cards of the particular jobs worked upon. The daily indirect labour time for each employee is entered on the time card covering the class of indirect labour. The indirect labour time cards must also record the account number assigned to the particular class of indirect labour and the machine center charged with the labour. The time cards are totaled at the end of the pay period and are forwarded to the Tabulating Department, wherein the weekly total hours are key-punched into the cards.

Upon the receipt of the time cards in the Tabulating Department and the completion of the key-punching, the first procedure is to sort the cards in employee and home machine center number sequence. By so doing, all of the cards for each employee are brought together, irrespective of the machine centers in which the employees worked. Then, by utilizing the employee's master cards, together with an IBM Multiplier, the total hours contained in the time cards are extended by the employees' guaranteed hourly rates. Retaining the time cards in the same sequence, they are then merged with the clock cards. A tabulation is then made, to secure a printed time sheet to show, for each employee; the regular, overtime and total hours; discrepancies, if any, between the total clock card and time card hours; the number of direct and indirect labour hours and the extended amount for those indirect hours that are paid on an hourly basis without bonus. The totals are accumulated at the same time for the machine centers.

When any discrepancies on the time sheet have been checked and it has been ascertained that the hours are in balance, the direct labour time cards are sorted in machine center worked sequence. A tabulation of the cards provides the total direct labour hours worked and the guaranteed hourly rate amounts, for each machine center. Similarly the total indirect labour hours and guaranteed hourly rate amounts, for indirect labour paid at hourly rates with bonus, can be secured for each machine center.

Production is recorded on production cards prepared from the production orders received in the machine centers. One card is prepared for each operation called for by the production order. The cards are used

to record the account, productive order, part, operation and machine center worked numbers; the number of operations completed and the actual running time of the machine or group of machines used.

Production credit cards are prepared for work spoiled in process due to defective workmanship. When it is possible to rectify the work spoiled, by reworking operations already performed, the cards are made out for the operations to be reworked. When the work is spoiled beyond rectification the cards include all operations performed in the machine center up to the point where the spoilage occurred. These cards are stamped "Labour Spoilage Credits". Credit cards are also prepared for each operation performed up to the spoilage point, for work spoiled due to defective material. These cards are stamped "Material Spoilage Credits".

The production and production credit cards are forwarded to the Tabulating Department, wherein the information as shown is key-punched into the cards.

By using the same procedure as previously mentioned under the material heading, the standard time per operation and the standard hourly rate applicable to the machine center are punched from the master labour cost card into the corresponding production and credit cards. The extension of the standard time for the operations by the actual number of operations performed, provides the standard time for the production. The standard time extended by the standard hourly rate, furnishes the standard cost of the production contained in each production card. The total of the production cards, less credits for defective workmanship and material, provide the total standard cost of the production.

The standard cost of production is then accumulated for each machine center by tabulating the cards. Separate totals are obtained for the production, defective workmanship credits and defective material credits. The percentage that the total production bears to the accumulated guaranteed hourly rate amounts is used as the basis to distribute the standard cost of the production to the direct labour employees for payroll purposes. This distribution is accomplished by multiplying the guaranteed hourly rate amount contained in the direct labour time cards by the percentage. The percentage for each machine center must be at least one hundred per cent, otherwise the guaranteed hourly rate amount is paid and the difference between that amount and the production figures is charged to an expense account. It can be seen from the foregoing that the employees are paid for good workmanship only and are paid the total standard cost of production when their production exceeds their hourly rate earnings.

The indirect labourers, serving the machine centers are paid the same percentage of their hourly rate amounts as a bonus, the calculation being performed in the same manner. Indirect labour arising from the payment of hourly rates for idle time, general labour and similar indirect labour is not included in the calculation of the bonus.

The accumulation of the direct and indirect labour time cards after the percentage extensions have been made, plus the cards containing allowances for overtime and cost of living bonus, furnishes the total gross pay for each employee. Although a description of the method used in the preparation of the payroll is not presented in this thesis, mention is made that the payroll is also completely prepared with IBM Machines. The

machines performing the calculations for unemployment insurance, income tax, miscellaneous deductions and the net pay. The payroll register and payroll envelopes are also printed automatically.

The labour time variance is obtained by accumulating the difference between the actual and standard hours contained in the production cards and by extending this difference by the machine center standard hourly rate. The standard hours used in this instance are the standard hours punched in the production cards less the standard hours in the defective workmanship credit cards.

The labour rate variance is calculated by sorting the productive labour time cards in guaranteed hourly rate sequence. A tabulation of the cards then provides the number of actual hours worked in each machine center at each different hourly rate. The difference between the standard hourly rate applicable to each machine center and each guaranteed hourly rate as shown on the tabulation, multiplied by the actual hours shown for each guaranteed rate, provides the rate variance.

A labour cost variance, arising from the performance of operations in a machine center having a higher or lower standard hourly rate than the machine center in which the work should have been done, can also be calculated. This variance can be obtained by utilizing the same procedure employed in the calculation of the material variance resulting from the use of substitute materials.

Bearing in mind the calculation of the labour variances and the stated payment of the standard cost of production to the productive employees, it is apparent that only the unfavorable variances appear in the accounting records. The favorable variances having been paid to the employees under the wage incentive plan, they are retained on subsidiary records for comparative purposes.

The total of the standard amounts contained in the production cards, less the total of the standard amounts in the standard defective workmanship and material credit cards, provides the standard labour cost charge to the work in process account. The total of the indirect labor time cards paid on a bonus basis and those paid at hourly rates, furnishes the total debit for indirect labour to the manufacturing expense control account.

Although in discussing the accumulation of the labor costs and the calculation of the labour variances, reference has been given only to the machine centers; mention is made that the sub-assembly and assembly cost and variances are calculated and accumulated in the same manner.

## Overhead and Flexible Expense Budgets

Flexible expense budgets for each machine center, service department, sub-assembly and assembly line were establishd to cover an entire year. To accomplish this, the productive capacity of the machine centers, sub-assembly and assembly lines; expressed in terms of direct labour hours, was determined for each five percent increase in production from the shutdown point, or zero percent; through standard production, or one hundred percent; to maximum productive capacity. After study and analysis of past expenses in relation to production and after the establishment of measurement units for expenses that did not lend themselves readily to the use of direct labour hours as a base; graph charts were prepared for each class of variable and

semi-variable expense. The graph charts were then utilized to secure the amount of each class of expense at each percentage of production for the flexible budgets. The addition of the fixed expenses, completed the budgets, with the exception of the proration of the service department expenses. Totals of the variable, semi-variable and fixed expenses were then secured for each of the budgets, in order that the amounts for which the persons in charge of the cost centers and departments were responsible, were made apparent before the addition of prorated expenses which in its variability was not entirely their responsibility. The addition of the expense amounts prorated from the service departments then provided the total amount of the budgets at each productive percentage. The division of the yearly budgets by twelve, provided the amounts for the monthly budgets. The expense budgets are reviewed and revised when necessary each year, prior to the commencement of the year for which the budgets are prepared.

The Machine Center Standard Hourly Burden Rate is arrived at by the division of the total expenses budgeted for standard production by the total standard direct labour hours required for that production. The burden rates for the sub-assembly and assembly lines are calculated in the same manner.

The application of the overhead to the production orders is also a part of the Tabulating Department procedure. This is accomplished by the reproduction of an overhead card from the production card. All information in the production card, with the exception of the standard labour amount, is reproduced. The automatic extension of the standard direct labour hours contained in each overhead card, by the standard hourly burden rate, provides the applied manufacturing expense for each labour operation. The production credit cards are included in this procedure. The total of the overhead cards less the total of the credits, furnishes the debit to the applied manufacturing expense control account.

The accumulation of the actual expense has been partially dealt with under the material and labour headings, with regard to indirect labour and material. An analysis of the indirect labour and material expenses, showing the account number and cost center totals, is obtained at the same time as the totals posted to the control accounts are secured. The remainder of the punched cards, representing the balance of the expense items are prepared from journal entries and other sources of entry. A tabulation of these cards, furnishing the account and cost center totals, together with the amount charged to the manufacturing expense control account.

The calculation of the variances from the budgeted figures necessitated the preparation of several sets of Master Budget Cards. These cards are prepared from the monthly expense budgets. One card being prepared for each class of expense at each productive percentage. The cards contain the expense account number; machine center, service department, sub-assembly or assembly line number; the budgeted amount and the productive percentage. These cards are not changed unless changes or revisions are made to the budgets during the year. Cards are not prepared for the portion of the budgets pertaining to expenses prorated from other departments.

When the production percentage has been determined, the corresponding master budget cards are taken from the file and are merged with the actual expense cards. A Tabulator is then used to print budget reports for

each of the cost centers and departments. These reports contain: the budgeted and actual expense figures; controllable variances, favorable or unfavorable; for each expense item and the totals in all instances. It should be noted at this point, that these reports are prepared prior to the distribution of the service department expense to the cost centers. Several copies of these reports are prepared, one of which is forwarded to the person in charge of the cost center or service department. The remaining copies are used to complete the final budget reports by transferring the service department expense to the machine centers, sub-assembly and assembly lines and thereby obtaining the total actual and budgeted expense for each cost center.

The favorable or unfavorable volume variances are calculated by determining the difference between the budgeted expense, at the productive percentage and the standard applied expense.

### Production Control, Work in Process, Finished Parts, Finished Sub-Assemblies and Finished Products

The production control that forms a part of this cost system, requires the preparation of several additional tabulating cards, from information sent to the Tabulating Department. Cards are prepared from a copy of the production order received from the production department. Into these cards is key-punched, the production order number; part, sub-assembly or assembly number; and the quantity ordered. Cards are also key-punched from the copy of the receiving reports showing the quantities of finished parts, sub-assembled units, or completed products, received into the finished parts, sub-assembled units, or finished products stores. These cards contain, the production order number; part, sub-assembly or finished products number, and the quantity inspected and delivered to stores. The latter cards are priced from master standard total cost cards and are extended on a multiplier.

Combining both the foregoing types of cards with the standard material requisition, standard labour, standard overhead and standard spoiled work cards, all of the necessary information for the production control is brought together. The cards are merged together in productive order number sequence and by utilizing a code number punched in the part, sub-assembly and final assembly section of the cards, they are separated into those three groups. With these cards a printed statement is secured from a Tabulator on which is shown, the production order number; part, sub-assembly or assembly number; quantity ordered; quantity made; quantity spoiled; balance on order; work in process standard amount; standard cost of spoiled work; standard cost of finished parts, sub-assemblies or finished products transferred to the respective stores departments and the standard value of the work remaining in process. In the same manner as previously mentioned, a balance card is automatically punched at the same time as this report is being tabulated. These balance cards are included with the foregoing types of cards when the same report is prepared for the next period. When the quantity balance on order, as punched into the balance card, has been reduced to zero, with the exception of small amounts resulting from the use of decimals in the extension of the standard requisition, labour and overhead cards. These amounts are charged or credited to an adjustment account which is closed out at the end of the year. In any case where the

amount remaining in the balance cards is too large to be due to the use of decimals, an investigation has to be carried out to determine the cause of the error.

There are no individual job cost record forms maintained for each production order in this cost system, as is normally the procedure in most manual job cost accounting systems. The detail of the work in process is obtained from the report and interpreted balance cards mentioned in the preceding paragraph. This is not always sufficient, for it can be understood that if, as mentioned, this report is prepared in production order number sequence it would require a considerable clerical job to accumulate the quantity of a part in process, particularly when several production orders for the same part are in process of manufacture. The flexibility of the punched card method, however, provides the means whereby the balance cards can be sorted and the figures accumulated by part number when necessary.

One work in process control account is maintained for material labour and overhead. There is no division in the control account to indicate the separate amounts applicable to the parts, sub-assemblies and finished goods in process. The separation of the cards, as previously stated, into the three groups, prior to the preparation of the production control report, furnishes the total of each subdivision. An analysis of each subdivision, to determine the amount of material, labour and overhead, can also be obtained by sorting and tabulating the cards.

Visible stock record forms are maintained for finished parts, sub-assemblies and finished products, in the same manner used in the accounting for raw materials. The transfer posting paper listings are prepared from the same receiving report cards used for the production control reports.

The figures necessary to transfer the standard cost of finished parts, sub-assemblies and finished products, from the work in process account, to the stock accounts are secured from the totals as shown on the production control report..

Although numerous additional reports and analyses are prepared from the cost information as outlined in this thesis, it is felt by the writer, that the more important functions of the cost system have been discussed and that any attempt to explain these additional reports and analyses is unnecessary.

# « STUDENT SECTION »

**Comments by MR. A. VAN HARRIS, C.A.**

Question 1—Fundamentals of Cost Accounting.

(a) What are the principal subsidiary ledgers used in the operation of a cost accounting system, and what is the purpose of those ledgers?

(b) Give two methods of treating purchases which do not go physically to stores. Discuss both methods.

## SOLUTION AND COMMMENTS

This question was included in the 1947 Fundamentals of Cost Accounting examination. For the accounting student who has had some practical experience the answer comes very easily. Under the first part there should be listed the manufacturing expense ledger, the selling and administrative expense ledger, the raw material stores ledger, the work in process ledger, the finished parts ledger, and the finished goods ledger. Other subsidiary ledgers, such as receivables and payables need not be included, as they are common to most company accounting records, and not necessary for a cost system. The purpose of each ledger is, of course, to provide details, according to a required classification supplementing the total which alone appears in the general ledger.

The second part of the question brings up a much debated point—the advantages and disadvantages of having material other than that placed on the stock shelves, funnelled through the stores control. It is generally agreed that theoretically it is very desirable to debit all material to stores, and clear it, when it has been issued by requisition. However, all accountants are aware of the practical difficulty of including in their detail records so many "in-and-out" items. The student might well discuss both methods, giving illustrations and conclude with the above-mentioned advantage and disadvantage.

**Problem 2**

During a certain month debits to the work in process accounts of a manufacturing concern were:

| | |
|---|---|
| For Material in Process | $ 12,000 |
| For labour in Process | 18,000 |
| For Manufacturing Expense in Process | 6,000 |
| | $ 36,000 |

The work in process accounts were credited and the finished goods accounts debited with three fourths of the material debits, two thirds of the labor debits, and two thirds of the manufacturing expense debits.

1. Set up accounts for Work in Process and Finished Goods; post the debits to Work in Process; prepare and post the journal entry for the transfer to Finished Goods.

2. Set up accounts for Material in Process, Labour in Process, and Manufacturing Expense in Process; post the debits to these accounts; prepare a compound journal entry to record the transfer to Finished Goods, open the account and post the journal entry.

3. Which method of accounting shows the more clearly the details of the transactions? Explain.

## SOLUTION

**Part 1**

**Work in Process Account**

| | Dr. | Cr. | | Bal. |
|---|---|---|---|---|
| Material | 12,000 | | | |
| Labour | 18,000 | | | |
| Manufacturing Expense | 6,000 | | Dr. | 36,000 |
| Finished Goods | | 25,000 | Dr. | 11,000 |

**Finished Goods Account**

| | Dr. | Cr. | | Bal. |
|---|---|---|---|---|
| Work in Process | 25,000 | | Dr. | 25,000 |

**Journal Entry**

| | Dr. | Cr. |
|---|---|---|
| Finished Goods | 25,000 | |
| Work in Process | | 25,000 |
| To transfer value of Finished Goods | | |

**Part 2**

**Material in Process**

| | Dr. | Cr. | | Bal. |
|---|---|---|---|---|
| Material | 12,000 | | Dr. | 12,000 |
| Finished Goods | | 9,000 | Dr. | 3,000 |

**Labour in Process**

| | Dr. | Cr. | | Bal. |
|---|---|---|---|---|
| Labour | 18,000 | | Dr. | 18,000 |
| Finished Goods | | 12,000 | Dr. | 6,000 |

**Manufacturing Expense in Process**

| | Dr. | Cr. | | Bal. |
|---|---|---|---|---|
| Manufacturing Expense | 6,000 | | Dr. | 6,000 |
| Finished Goods | | 4,000 | Dr. | 2,000 |

**Finished Goods**

| | Dr. | Cr. | | Bal. |
|---|---|---|---|---|
| Sundries | 25,000 | | Dr. | 25,000 |

**Journal Entry**

| | Dr. | Cr. |
|---|---|---|
| Finished Goods | 25,000 | |
| Material in Process | | 9,000 |
| Labour in Process | | 12,000 |
| Manufacturing Expense in Process | | 4,000 |
| To Transfer Value of Finished Goods | | |

**Part 3**

The obvious advantage is that the analysis of the elements of cost is available in three sections under part 2. This is of considerable help when further data must be obtained regarding the costs.